

Curriculum Vitae

Mohammad Ghorbani

Master of Amirkabir University of Technology

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RESEARCH INTERESTS

- Cloud Security
- Security Protocols
- Network Security
- Cryptography and Cryptanalysis
- Formal Methods for Security
- Database Security
- Privacy Preserving
- Vulnerability Analysis

EDUCATION

M.Sc. Computer Engineering / Information Security Engineering

Amirkabir University of Technology (Tehran Polytechnic), Tehran-Iran, Since 2013-2016

- **Thesis Title:** Dynamic Slicing to Verify Information-Flow Security in Concurrent Programs
- **Supervisor:** Dr. Mehran S. Fallah
- **Overall GPA:** 16.03/20

B. Sc. Computer Engineering / Software Engineering

Quchan University of Advanced Technologies Engineering, Khorasan Razavi-Iran, Since 2007-2012

- **Thesis Title:** Survey and Implementation of Web and FTP servers
- **Supervisor:** Dr. Mohammad Rezaii
- **Overall GPA:** 17.13/20

PUBLICATION

- Ghorbani. Mohammad, Mehran. Fallah, "Program Slicing to Verify Information-Flow Security in Concurrent Programs".
Under review

HONORS AND ACHIEVEMENTS

- Ranked 55th among about 30,000 participants in Iran nationwide universities and colleges entrance exam for M.Sc in Information Technology Engineering, 2013.
- Ranked 1th among 40 students in Software Engineering Group (3 semester), 2007-2009.
- Ranked 150th among about 65,000 participants in Iran nationwide universities and colleges entrance exam in Hardware Engineering, 2010.
- Ranked top 1% among about 65,000 participants in Iran nationwide universities and colleges entrance exam in Software Engineering, 2010.
- Ranked 3th in Information security practical competition at the Amirkabir University of Technology (Tehran Polytechnic), 2013.

EXPERIENCES

- **Senior researcher at APA research center (CERT Division)**, Amirkabir University of Technology, Supervisor: Dr. Babak Sadeghiyan and Dr. Salman Niksefat, Since Fall 2015.
- **Network Security Graduate Teaching Assistant**, Amirkabir University of Technology, Supervisor: Dr. Salman Niksefat, Fall 2016.
- **Practical Network Security Teaching**, Amirkabir University of Technology, Fall 2016.
- **Researcher at Computer Security Group research center**, Amirkabir University of Technology, Supervisor: Dr. Hamidreza Shahriari, Fall 2014 - Spring 2015.
- **Research Assistant at Formal Security Lab**, Amirkabir University of Technology, Supervisor: Dr. Mehran S. Fallah, Fall 2013 - Fall 2015.
- **Database Security Graduate Teaching Assistant**, Amirkabir University of Technology, Supervisor: Dr. Hamidreza Shahriari, Spring 2015.
- **Passed Introduction to Penetration Testing and Advanced Penetration Testing Laboratory**, Amirkabir University of Technology, Supervisor: Dr. Babak Sadeghiyan, Fall 2013 and Fall 2015.
- **Passed Network Security Laboratory**, Amirkabir University of Technology, Supervisor: Dr. Babak Sadeghiyan and Dr. Salman Niksefat, Fall 2015.
- **Passed Computer Hacking Forensic Investigator (CHFI) Laboratory**, Amirkabir University of Technology, Supervisor: Dr. Babak Sadeghiyan, Spring 2015.

PRESENTATIONS

- **Security for Electronic Exams**, Security Protocols, M.Sc Course Presentation, Amirkabir University of Technology, 2015.
- **Run-time Information Flow Monitoring**, Advanced Topics in Formal Models & Information Security, M.Sc Course Presentation, Amirkabir University of Technology, 2015.
- **Exploiting In-network Aggregation for Big Data Applications**, Cloud Computing, M.Sc Course Presentation, Amirkabir University of Technology, 2015.
- **Program Dependence Graph for Information-Flow Security**, Seminar, M.Sc Course Presentation, Amirkabir University of Technology, 2014.
- **Program Dependence Graph and Program Slicing**, Formal Models and Information Security, M.Sc Course Presentation, Amirkabir University of Technology, 2014.
- **Security and Privacy in Location-Based Services**, Database Security, M.Sc Course Presentation, Amirkabir University of Technology, 2014.
- **Rebound Attacks on the Grøstl Hash Function**, Applied Cryptography, M.Sc Course Presentation, Amirkabir University of Technology, 2013.
- **How To Protect From SQL Injection**, Seminar, B.Sc Course Presentation, Quchan University of Advanced Technologies Engineering, 2012.

SELECTED PROJECTS

- **Implementation and Analysis of Privacy-Preserving Set Operations**, Security Protocols Course Project, Amirkabir University of Technology 2015.
- **Write a Standalone Application in Spark to Count the Total Number of Words in a File Stored in the HDFS**, Cloud Computing Course Project, Amirkabir University of Technology, 2015.
Skills Used: *Spark, HDFS*.
- **Configuring Oracle Database with all Security Features**, Database Security Course Project, Amirkabir University of Technology 2014.
Skills Used: *Oracle DB, PL/SQL, SQL PLUS*.
- **Detecting and Exploiting the OpenSSL Heartbleed Vulnerability**, Database Security Course Project, Amirkabir University of Technology, 2014.
Skills Used: *Metasploit, Nmap, MySQL, OpenSSL, Kali Linux*.
- **Linear and Differential Cryptanalysis of 8-Round DES**, Applied Cryptography Course Project, Amirkabir University of Technology, 2013.
Skills Used: *C, C++*.

- **Evaluating Avalanche Effect of RC6 Block Cipher**, Applied Cryptography Course Project, Amirkabir University of Technology, 2013.
Skills Used: C, C++.
- **Using SAML and XACML for web service security and privacy**, Secure Computer Systems Course Project, Amirkabir University of Technology, 2013.
Skills Used: *ASP.NET*.
- **Preventing Information Flow via SELinux**, Secure Computer Systems Course Project, Amirkabir University of Technology, 2013.
- **Implementing Web and FTP Servers**, B.Sc Final Project, Quchan University of Advanced Technologies Engineering, 2011.
Skills Used: *C#.NET, SQL Server*.
- **Designing a CPU Architecture**, Computer Architecture Course Project, Quchan University of Advanced Technologies Engineering, 2010.
Skills Used: *Proteus*.

TECHNICAL SKILLS

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| <ul style="list-style-type: none"> • Programming Languages:
C, C++, C#.Net, Familiar with: Java • Web Technologies:
HTML, CSS, ASP.NET, Familiar with: Javascript • Security Tools:
Metasploit, Cain & Abel, Nessus, Nmap, Acunetix, WebInspect, Forensic Toolkit (FTK), Burp Suite, Kali Linux, | <ul style="list-style-type: none"> • Databases:
Microsoft SQL Server, Oracle DB, MySQL, NoSQL, NewSQL • Operating Systems and Tools:
Windows, Linux, Vmware • Other Tools, Packages and Solutions:
Matlab, Proteus, Arena, Wireshark, Microsoft Visual Studio, SELinux, Eclipse IDE, Hadoop File System(HDFS), Spark, Scala Programing, GraphX, Hbase |
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REFERENCES

- **Mehran S. Fallah**
Associate Professor
Department of Computer Engineering and IT
Amirkabir University of Technology
Email: msfallah@aut.ac.ir
- **Amir H. Payberah**
Researcher at SICS
Lives in Stockholm, Sweden
Email: amir@sics.se
- **Salman Niksefat**
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